The Somatization Predictions Derived From Personal Characteristics

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Abstract

Introduction: Somatization is amongst the disorders which medical experts cannot justify. The current study was an attempt to clarify the role of personal traits in somatization disorder. Regarding the method, it is worth mentioning that the present study is a description of correlation.
Methods: A total of 350 subjects were chosen through stratified random sampling and participated in the study. Hence, NEO Personality Inventory-Revised (NEOPI-R) and the somatization PHQ-15 questionnaire were implemented for gathering data. The gathered data were analyzed by regression analysis.
Results: The results indicated that there is a negative relationship between somatization and the personality factors which included extraversion, agreeableness, and conscientiousness. It is safe to claim that there is a significant relationship between neuroticism and somatization, while there is no relationship between neuroticism and somatization, or between openness to experience and somatization.
Conclusion: Based on the findings of the current study, it can be concluded that people with certain personality characteristics are more likely to be affected by somatization disorders.

Keywords: Somatization, Extraversion, Neuroticism, Agreeableness, Conscientiousness, Openness to Experience

Introduction

The term somatization has been proposed by Stekel in 1908 [1], but it is a disorder which has been known since ancient Egypt, and was named "hysteria" for many years. It was derived from the Greek word hysteria, and was mistakenly believed that only women can be affected by it. In 1859 a French physician, Paul Briquette, gave attention to a number of symptoms and the affected devices, and pointed out to its frequently-chronic process. These emphasizes and attempts result in that the disorder was known as Briquette Syndrome interminably [2]. Somatization is one of the somatoform disorders which put the medical checkups out of action in providing an explanation [3]. It is considered to be a common problem in healthcare systems [4] and various cultures [5]. The mentioned disorder is one of the major issues of the public health, moreover the affected people rarely see physicians for it [6]. People who suffer from this disease are often from the lower classes of the society, and are usually not psychologically educated [7].

It can be said that amongst pseudo-physical disorders, somatization is the most valid one regarding stability in diagnosing [8]. Diagnosing somatization as a disorder is still quite controversial. Although several physical pains is necessary for diagnosing the disorder but it is not quite enough. Namely for the act of diagnosis to be done successfully, the person should suffer from four symptoms of pain, two gastrointestinal symptoms, a sexual symptom and traces of nervousness [2].

Therapists mostly find this disorder amongst the most tedious ones in terms of treating, while patients also report profound dissatisfaction undergoing the treatment [9]. These

people heavily make use of more medical care than the others [10]. So, somatization is a very debilitating and costly disorder [11]. Various factors have been proposed for the etiology of these disorders. Neuropsychological experiment has shown that complaints are mostly associated with errors in the processing of health information [12]. Moreover, it has been suggested by several authors that somatization can be considered as an equivalent for mood disorders [13].

The personality traits are amongst the factors that have been found in the revelation of the somatization disorder [14]. There are a handful of studies regarding the relationship between personality and somatization. It is safe to claim that the relationship between the intensity and persistence is widely agreed upon. As reported in the literature, personality disorders are considered as a part of the history of personality disorders. Hence, the discussed DSM disorder is to be put on axis II. [15].

In their study, Chalabianloo and Garoosi Farshi [16] have suggested that personality characteristics have the ability to predict somatization. There are a few case studies all of which confirm this theory, but further investigations are required in order to fully verify it [17]. In the past decade, addressing the most basic issues in personality psychology namely the search for finding the scientific classification of personality traits has received great interest [18]. Five factor model of personality is a hierarchical model of personality traits which places the five broad representations at the highest level of abstraction. Each dipole element (such as extraversion vs. introversion) combines several special surface elements (Good behavior towards people), which in turn includes a collection of other special qualities of more surface objects (like intimacy) [19]. This template seems to be a fundamental discovery for the researchers who are interested in individual differences in personality [20].

This pattern has been achieved through several studies carried out by using factor analysis and the focus on personality traits. In other words through using factor analysis the researchers, came to conclusion that it might be possible to place five major dimensions within the individual differences in personality characteristics [21]. Many researchers believe that these features are universal, and are more widespread than culture and language, however have not been universally accepted. Nevertheless the five factor model of personality theory and empirical research, are still amongst the most respected personality patterns [23]. Five basic personality traits also include: neuroticism, extraversion, openness to experience, agreeableness and conscientiousness [24].

The study was based on the lack of adequate data on somatization disorder and its relationship with personality characteristics of the samples in Iran. Accordingly, the present study was conducted on the purpose of somatization due to personal characteristics.

Method

The present study is a descriptive correlational research. The statistical population included all the students of the Azerbaijan Shahid Madani University, Tabriz University,

and Tabriz PNU. Among them, 340 students who were selected through stratified random sampling -based on Morgan sampling- participated in the study. After the selection, the Revised NEO Personality Inventory scales selection (NEOPI-R) NEO and somatization Questionnaire (PHQ-15) were administered. With the intention of being ethical regarding the subjects' rights, it was noted both orally and written on the questionnaire that: "The information requested in this questionnaire is for research purposes, and except of age and sex determinations, no personal details will be included" . Furthermore, 16 subjects were excluded from the statistical analysis due to their incomplete responses to the questionnaire, thus the final sample of the study was reduced to 324 male and female students.

Revised NEO Personality questionnaire (NEOPI-R): This questionnaire is one of the personality tests which has been designed based on factor analysis. It is considered to be the most comprehensive tool in terms of personality that Costa & McCrae introduced in 1992 as the NEO Personality questionnaire. The revised form of this questionnaire has been presented by the same authors as an enhanced form of the NEO questionnaire. The long form of the questionnaire is designed in 240 words in order to measure five features or key areas including neuroticism, extraversion, openness to experience, agreeableness and conscientiousness. In short form, each factor is measured with 12 questions. Costa and McCrae studies [25] have indicated that the correlation between the short form and the long form for the five sub-scales ranges from 0.77 to 0.92. The internal consistency of the subscales is estimated to be in the range of 0.68 to 0.86. The short form questionnaire has been validated in different countries around the world. In Iran, the long form was validated by Garoosi Farshi. The validation of the simulation results are the same as the results of the native language test. The main features of the Alpha coefficients for N, E, O, A, C are 0.86, 0.73, 0.56, 0.68 and 0.86 respectively [26].

The somatization questionnaire (15-PHQ): This is questionnaire with 15-questions for measuring somatic symptoms, and somatization screening. This scale is a part of the full questionnaire PHQ scale, and inquires a total of 15 annoying somatization from respondent. Among the 15 questions, 14 of them are the most common somatization symptoms that have been proposed in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) [27]. In a study conducted by Sing Lee, Yee Ling and Tsang the Alpha Cronbachis for this questionnaire has been reported to be 0.79 [28]. The standardization of this questionnaire was carried out by Abdolmohammadi et al. By using the somatization scale, the validity of the questionnaire has been reported to be 0.74 SCL-90. Also, by using Cronbach's alpha the internal consistency of the questionnaire has been reported as 0.79 [29].

Results

The frequency of the participants in the sexual classes based on the characteristics of the descriptive statistics

are shown in Table (1).

Before examining the share of Alexithymia prediction elements in the regression model, the simple correlation between variables have been examined. As shown in Table (2), it is obvious that among the components of the five factors of extraversion, agreeableness and conscientiousness have a significant negative relationship with somatization. Also, neuroticism has a significant positive relationship with somatization and there is no significant relationship between openness to experience and somatization.

Before using multiple regression analysis examining assumptions to assess the independent predictive variables, the multiple linearity assumption was tested. The software provided the indexes of tolerance and variance inflation. The index of variance tolerance was within the range of 0.65 to 0.91, and the inflation factor

index was in the range of 1.30 to 1.48. Hence, it can be assumed that the predictor variables are independent of each other, and the multiple linear does not occur. Moreover, the natural curve also indicates that a deviation from the normality does not occur.

In the next step, for investigating which personal variables can be utilized to predict somatization, regression analysis was used. The data in Table (2) reveals that the multiple correlation for the above regression model is MR=0.45. Its square, which means determining coefficient is equal to $R2 =0.21$, and corrected coefficient is 0.18. In other words, 0.18 somatization changes are explained by personal characteristic (neuroticism, extraversion and conscientiousness). Furthermore, agreeableness and openness to experience didn't have any significant role in the prediction of somatization.

Table 1. Demographic characteristics of the sample test

Group	The number	percentage	mean age	standard deviation
Female	202	62.5	21.83	1.87
Male	122	37.5	22.48	2.16
The total sample	324	100	22.15	2.01

Table 2. Simple correlation of five-factor personality traits and somatization

Elements	1	2	3	4	5	6
somatization	1					
extraversion	**-0.281	1				
neuroticism	**0.376	*-0.296	1			
agreeableness	*-0.164	0.096	**-0.325	1		
conscientiousness	*-0.278	**0.221	**-0.303	**0.271	1	
Openness to experience	-0.005	**0.324	-0.077	0.053	**0.248	1

*0.05<P, **0.01<P

Table 3. Regression analysis for prediction of somatization through the personal characteristics

Variable	Indicator									
	B	β	t	P	R	2 R	2 RΔ	E .S	F	P
model					0.45	0.21	0.18	2.30	7.16	0.001
extraversion	-0.087	-0.19	-2.32	0.02						
neurtiism	0.12	0.25	2.86	0.001						
agreebleness	0.009	0.03	-0.25	0.80						
conscientiousness	-0.088	-0.17	-2.11	0.03						
Openness to experience	0.049	0.09	1.13	0.25						

Predictor variable: Personality Characteristics

Criterion variables: somatization

Discussion

The current study aimed at predicting the somatization based on personal characteristics, and the results indicated that personal characteristics have a serious role in the prediction of somatization, and these findings are in line with those of the previous studies [14, 15, 16, 30, and 31]. Results of regression analysis indicated that concerning somatization parameters, the three personal factors were able to predict changes in these indexes. Amongst the personal factors, neuroticism had a positive relationship and extraversion and conscientiousness factors had a negative relationship with morality. Among them, neuroticism had the greatest share. Actually, emotional distress, stress and anxiety can cause a wide range of physiological and physical disorders [32]. This matter has been confirmed in the present study as well.

On the other hand, the findings indicated that extraversion is inversely related to somatization. It has been shown in some studies that some personal traits result in the people becoming more sensitive [33]. Introversion is among these characteristics. This is due to poor communication with people when they live in situations of experiencing high stress. In these kind of situations they use physical symptoms as a way of getting help from others [34]. The mentioned finding was also confirmed in this study. With precise examinations of the attributes pertinent to personality characteristics, it can be inferred that with increasing symptoms such as depression, anxiety and negative emotions, along with the desire to escape from the society (asocial /anti-social behaviors) and also with the negligence regarding life affairs resulting in loss of social and work situations, it

would as a result increase the likelihood of psychological problems and their physical symptoms. In other words, somatization disorder is amongst the indicators that personal characteristic contributes in revelation. There are other investigations which indicate that neuroticism has a positive relationship, while extroversion and morality have a negative relationship with somatization. It should be noted that the present study was based on a descriptive method and makes it difficult to describe the results based on cause and effect relationships [16]. Besides, the present study was delimited regarding the number of the samples, since all were selected from the students' community and belonged to a particular geographical district, consequently the findings should be generalized to other populations by caution. The last but not least point is that, clinical samples suffering from the somatoform disorder should also be examined in the future studies.

Conclusion: Based on the findings of the current study, it can be concluded that people with certain personality characteristics are more likely to be affected by somatization disorders compared to those without this specific disease.

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